

Contents of Applied Physics B55

This listing presents the papers in alphabetical order of the first author. The Author Index that follows covers **Applied Physics A** and **B**, and is presented in tabular form. The names are listed in alphabetical order in the first column. The second and third columns contain the bibliographic data necessary to locate the paper. The issue is specified by the number separated from the volume number by a slash. The PACS numbers given in the fourth column may be used in conjunction with the PACS listing on the left to infer the topic of a paper.

Photophysics and Laser Chemistry

- Adachi T., Kondo K., Watanabe S.:
Gas density measurement of pulsed gas jets with the XeF four-photon fluorescence induced by a KrF laser.
Appl. Phys. B 55/4, 323-326 (1992) PACS: 34.00 42.55
- Agranat M.B., Anisimov S.I., Makshantsev B.I.:
The anomalous thermal radiation of metals produced by ultrashort laser pulses.
Appl. Phys. B 55/5, 451-461 (1992) PACS: 42.40 42.82 73.90
- Al-Saidi L.A., Harrison R.G.:
Self-focussing of CO₂ laser radiation in SF₆.
Appl. Phys. B 55/6, 501-502 (1992) PACS: 42.65J
- Albrecht H.-St., Heist P., Kleinschmidt J., Lap D. van, Schröder T.:
Measurement of ultraviolet femtosecond pulses using the optical Kerr effect.
Appl. Phys. B 55/4, 362-364 (1992) PACS: 42.60B 42.65 42.79
- Ansmann A., Riebesell M., Wandinger U., Weitkamp C., Voss E., Lahmann W., Michaelis W.:
Combined Raman elastic-backscatter LIDAR for vertical profiling of moisture, aerosol extinction, backscatter, and LIDAR ratio.
Appl. Phys. B 55/1, 18-28 (1992) PACS: 42.68R 93.85 94.10 92.60
- Bachor H.-A., Rottengatter P., Savage C.M.:
Correlation effects in light sources with high quantum efficiency.
Appl. Phys. B 55/3, 258-264 (1992) PACS: 42.50
- Baev V.M., Eschner J., Paeth E., Schler R., Toschek P.E.:
Intra-cavity spectroscopy with diode lasers.
Appl. Phys. B 55/6, 463-477 (1992) PACS: 42.55B 42.55 42.65
- Baldacchini G., Chakraborti P.K., D'Amato F.:
Infrared diode laser absorption features of N₂O and CO₂ in a Laval nozzle.
Appl. Phys. B 55/1, 92-101 (1992) PACS: 47.55E 33.10
- Belic M., Ljuboje Z., Sauer M., Kaiser F.:
Computational chaos in nonlinear optics.
Appl. Phys. B 55/2, 109-116 (1992) PACS: 42.50L 42.65
- Bergman K., Haus H.A., Shirasaki M.:
Analysis and measurement of GAWBS spectrum in a nonlinear fiber ring.
Appl. Phys. B 55/3, 242-249 (1992) PACS: 42.50 42.80
- Bollanti S., Lazzaro Di P., Flora F., Letardi T., Lisi N., Zheng C.E.:
Space and time resolved discharge evolution of a large volume X-ray triggered XeCl laser system.
Appl. Phys. B 55/1, 84-91 (1992) PACS: 42.55G 52.80
- Brambilla M., Castelli F., Lugiatto L.A., Pessina E.M., Prati F., Strini G., Galatola P.:
Generation of nonclassical states by nonlinear optical systems.
Appl. Phys. B 55/3, 190-201 (1992) PACS: 42.50 42.65
- Brüggemann D., Hertzberg J., Wies B., Waschke Y., Noll R., Knoche K.-F., Herziger G.:
Test of an optical parametric oscillator (OPO) as a compact and fast tunable Stokes source in coherent anti-Stokes Raman spectroscopy (CARS).
Appl. Phys. B 55/4, 378-380 (1992) PACS: 42.60 42.65 42.80
- Chaplik A.V., Ioriatti L., Baginato V.S.:
Light-induced effect on the density distribution in a sample of cold trapped atoms.
Appl. Phys. B 55/6, 485-487 (1992) PACS: 34.50F 32.80 34.50
- Chen H., Yu J.R., She C.Y.:
Arrival of Pinatubo disturbances in the stratospheric aerosol layer over Fort Collins, CO, observed by a LIDAR at 589 nm.
Appl. Phys. B 55/2, 159-163 (1992) PACS: 42.68A 42.68 92.60 93.30

- Csillag L., Janossy M.:
Linewidth studies on the Ar⁺(+) 476.5 nm and 480.6 nm lines excited in a helium-argon hollow cathode discharge.
Appl. Phys. B 55/4, 401-404 (1992) PACS: 34.80D 42.55 52.80
- Dämmig M., Boden C., Mitschke F.:
On the detection of deterministic structures in irregular signals.
Appl. Phys. B 55/2, 121-125 (1992) PACS: 02.70 05.45
- Datsyuk V.V.:
Peculiarities of KrF excimer vibrational relaxation in low-pressure Kr/F₂ mixtures excited by a short pulse.
Appl. Phys. B 55/1, 60-64 (1992) PACS: 42.55G
- Dattoli G., Giannessi L., Renieri A., Marino A., Serafini L.:
A note on RF photocathode guns triggered by synchrotron light.
Appl. Phys. B 55/5, 446-450 (1992) PACS: 41.60A 41.85 41.60
- Dreier T., Dreizler A., Wolfrum J.:
The application of a Raman-shifted tunable KrF excimer laser for laser-induced fluorescence combustion diagnostics.
Appl. Phys. B 55/4, 381-387 (1992) PACS: 33.00 42.65
- Dreier T., Schiff G.:
High temperature O₂-CARS thermometry.
Appl. Phys. B 55/4, 388-390 (1992) PACS: 33.00 42.65
- Egito F.D., Davis C.R.:
Dopant-induced excimer laser ablation of poly(tetrafluoroethylene): II. Effect of dopant concentration.
Appl. Phys. B 55/6, 488-493 (1992) PACS: 42.55G 78.65 81.60 82.50
- Feikema D.A., Domingues E., Cottreau M.-J.:
OH rotational temperature and number density measurements in high-pressure laminar flames using double phase-conjugate four-wave mixing.
Appl. Phys. B 55/5, 424-429 (1992) PACS: 42.65 82.40
- Filippo A.A., Perrone M.R.:
Experimental study of a broad-band XeCl double-pass amplifier with SBS mirror.
Appl. Phys. B 55/1, 71-75 (1992) PACS: 42.65E 42.65
- Fuss W., Göthel J., Kompa K.L., Ivanenko M., Schmid W.E.:
Multiwavelength Q-switched CO₂ laser with continuous discharge.
Appl. Phys. B 55/1, 65-70 (1992) PACS: 42.60D 42.60
- Garnier A., Chanin M.L.:
Description of a Doppler Rayleigh LIDAR for measuring winds in the middle atmosphere.
Appl. Phys. B 55/1, 35-40 (1992) PACS: 42.68W 94.10 93.85 93.30
- Gerasimchuk A., Kornilov S., Ostrejovskij I., Protchenko E., Tymper S.:
Selective optothermal detection of NO₂ and H₂O with a frequency-tuned CO waveguide laser.
Appl. Phys. B 55/6, 503-508 (1992) PACS: 42.55L
- Hadjichristov G.B., Kircheva P.P.:
Optical four-wave mixing in bulk polymers.
Appl. Phys. B 55/4, 373-377 (1992) PACS: 42.65D
- Häger Ch., Kaiser F.:
Bifurcation structures into chaos of delay-differential equations for a passive optical ring resonator.
Appl. Phys. B 55/2, 132-137 (1992) PACS: 42.65P
- Hattori M., Ishikawa Y., Mizuta K., Arai S., Sugimoto S., Shimizu Y., Kawanishi S., Suzuki N.:
¹³C-selective infrared multiple-photon decomposition study of CBrClF₃.
Appl. Phys. B 55/5, 413-418 (1992) PACS: 82.50
- Hauchecorne A., Chanin M.L., Keckhut P., Nedeljkovic D.:
LIDAR monitoring of the temperature in the middle and lower atmosphere.
Appl. Phys. B 55/1, 29-34 (1992) PACS: 42.68A 33.20 94.10 93.30
- Heitmann U., Kötteritzsch M., Heitz S., Hese A.:
Efficient generation of tunable VUV laser radiation below 205nm by SFM in BBO.
Appl. Phys. B 55/5, 419-423 (1992) PACS: 42.65D 42.60
- Hilico L., Courty J.-M., Fabre C., Giacobino E., Abram I., Oudar J.L.:
Squeezing with $\chi^{(3)}$ materials.
Appl. Phys. B 55/3, 202-209 (1992) PACS: 42.50K 42.65
- Hirano T., Matsuoka M.:
Generation of broadband squeezed states pumped by CW mode-locked pulses.
Appl. Phys. B 55/3, 233-241 (1992) PACS: 42.50D 42.65
- Höling B., Leuchs G., Ruder H., Schneider M.:
An argon ion ring laser as a gyroscope.
Appl. Phys. B 55/1, 46-50 (1992) PACS: 42.60D 06.30
- Hooker S.M., Haxell A.M., Webb C.E.:
Influence of cavity configuration on the pulse energy of a high-pressure molecular fluorine laser.
Appl. Phys. B 55/1, 54-59 (1992) PACS: 42.55H 42.60

- Hope D.M., McClelland D.E., Bachor H.-A., Stevenson A.J.:
The atom-cavity system as a generator of quadrature squeezed states.
Appl. Phys. B 55/3, 210-215 (1992) PACS: 42.50
- Hung Nguyen Dai, Meyer Y.H.:
Tunable sub-100 femtosecond dye-laser pulses generated with a nanosecond pulsed pumping.
Appl. Phys. B 55/5, 409-412 (1992) PACS: 42.55M 42.60
- Ilyenkov A.V., Odoulov S.G., Soskin M.S., Vasnetsov M.V.:
Phase-matched light-induced scattering, mirrorless self-oscillation, and generation of nearly retropropagating waves in $\text{LiNbO}_3:\text{Fe}$ in "forbidden" interaction geometry.
Appl. Phys. B 55/6, 509-512 (1992) PACS: 42.25 42.70 78.20
- Jeffries J.B., Raiche G.A., Jusinski L.E.:
Detection of chlorinated hydrocarbons via laser-atomization/laser-induced fluorescence.
Appl. Phys. B 55/1, 76-83 (1992) PACS: 33.00 82.80
- Jörg A., Meier U., Kienle R., Kohse-Höinghaus K.:
State-specific rotational energy transfer in OH ($A^2\Sigma^+$, $v'=0$) by some combustion-relevant collision partners.
Appl. Phys. B 55/4, 305-310 (1992) PACS: 34.50
- Kesselring R., Kalin A.W., Kneubühl F.K.:
Mid-infrared nonlinear phenomena in polycrystalline semiconductors.
Appl. Phys. B 55/5, 437-445 (1992) PACS: 07.60 42.65
- Koprnikov I.G., Kortenski T.G., Ilev I.K.:
Cavity-taper output nitrogen laser.
Appl. Phys. B 55/2, 171-176 (1992) PACS: 42.60B 42.81
- Koudoumas E., Efthimiopoulos T.:
Effect of an autoionizing state in the double-resonant four-wave sum mixing in Hg.
Appl. Phys. B 55/4, 355-361 (1992) PACS: 42.65K
- Krolkowski W., Luther-Davies B.:
The effect of a high external electric field on a photorefractive ring phase conjugator.
Appl. Phys. B 55/2, 180-182 (1992) PACS: 42.65P
- Kürz P., Paschotta R., Fiedler K., Sizmann A., Leuchs G., Mlynek J.:
Squeezing by second-harmonic generation in a monolithic resonator.
Appl. Phys. B 55/3, 216-225 (1992) PACS: 42.50D 42.65
- Lang P.T., Schatz W., Kass T., Heusinger M.A., Renk K.F., Fusina L.:
Efficient generation of FIR radiation by optical pumping of D_2^{18}O .
Appl. Phys. B 55/4, 347-354 (1992) PACS: 42.55L 42.65
- Letokhov V.S., Sekatskii S.K.:
Laser photoelectron microspectroscopy for imaging impurity ions, color centers, and small-size irregularities in dielectric media.
Appl. Phys. B 55/2, 177-179 (1992) PACS: 07.80 78.50 79.60
- LIANG Peihui, CHEN Qiying, ZHANG Shaofeng, LEI Jianqiu:
Polarization and power characteristics of pulsed dye lasers with transverse pumping.
Appl. Phys. B 55/6, 494-500 (1992) PACS: 42.55
- Lo D., Farris J.E., Lawless J.L.:
Multi-megawatt superradiant emissions from coumarin-doped sol-gel derived silica.
Appl. Phys. B 55/4, 365-367 (1992) PACS: 42.55M 42.55 42.60
- LU Xuebiao, WANG Lei, CHEN Yiqing, QIU Mingxin:
Asymmetrical spectral broadening of SRS and its temperature dependence in a phenylethanol liquid-core wave-guide optical fiber.
Appl. Phys. B 55/4, 319-322 (1992) PACS: 42.55M 42.65
- McRae G.A.:
Evaluation of the collisionless contribution to the measured infrared multiphoton decomposition.
Appl. Phys. B 55/4, 341-346 (1992) PACS: 82.20W 33.80 42.60
- Milton M.J.T., Woods P.T., Jolliffe B.W., Swann N.R.W., McIlveen T.J.:
Measurements of toluene and other aromatic hydrocarbons by differential-absorption LIDAR in the near-ultraviolet.
Appl. Phys. B 55/1, 41-45 (1992) PACS: 42.68A 42.68 33.20 92.60
- Minkovski N., Mirtchev T., Ivanov L.:
Reduced threshold of a stimulated four-wave mixing process in an optical fiber.
Appl. Phys. B 55/5, 430-432 (1992) PACS: 42.65K 42.81
- Möller M., Lange W.:
Measuring chaotic scenarios in a sodium-filled resonator.
Appl. Phys. B 55/2, 126-131 (1992) PACS: 42.50T 42.65
- Ning C.Z., Haken H.:
Elimination of variables in simple laser equations.
Appl. Phys. B 55/2, 117-120 (1992) PACS: 42.55 42.65 02.00
- Ou Z.Y., Pereira S.F., Kimble H.J.:
Realization of the Einstein-Podolsky-Rosen paradox for continuous variables in nondegenerate parametric amplification.
Appl. Phys. B 55/3, 265-278 (1992) PACS: 42.50
- Pfalzner S.:
Influence of strong laser fields on the inverse Bremsstrahlung collision frequency.
Appl. Phys. B 55/4, 368-372 (1992) PACS: 52.40N 52.50
- Pimentel N.P., Fellows C.E., Borges A.M., Massone C.A.:
Preionization effects of iso- C_4H_{10} in N_2 TE UV lasers.
Appl. Phys. B 55/5, 433-436 (1992) PACS: 42.60
- Polzik E.S., Carri J., Kimble H.J.:
Atomic spectroscopy with squeezed light for sensitivity beyond the vacuum-state limit.
Appl. Phys. B 55/3, 279-290 (1992) PACS: 42.62F 32.80 42.50
- Puech V., Prigent P., Brunet H.:
High-efficiency, high-energy performance of a pulsed HF laser pumped by phototriggered discharge.
Appl. Phys. B 55/2, 183-185 (1992) PACS: 42.55E 42.60
- Rarity J.G., Tapster P.R., Levenson J.A., Garreau J.C., Abram I., Mertz J., Debuisschert T., Heidmann A., Fabre C., Giacobino E.:
Quantum correlated twin beams.
Appl. Phys. B 55/3, 250-257 (1992) PACS: 42.50D 42.65
- Rarity J.G., Tapster P.R.:
Quantum communications.
Appl. Phys. B 55/3, 298-303 (1992) PACS: 42.50W 03.65 42.25
- Roch J.F., Roger G., Grangier P., Courty J.-M., Reynaud S.:
Quantum non-demolition measurements in optics: A review and some recent experimental results.
Appl. Phys. B 55/3, 291-297 (1992) PACS: 42.50D 03.65
- Sasada H., Kubota O.:
Frequency of Lamb-dip-stabilized 1.52- μm He-Ne lasers.
Appl. Phys. B 55/2, 186-188 (1992) PACS: 32.30B 42.55 42.72
- Sauer M., Kaiser F.:
Spatial symmetry breaking and coexistence of attractors in a nonlinear ring cavity.
Appl. Phys. B 55/2, 138-143 (1992) PACS: 42.65B
- Sentrayan K., Major L., Michael A., Kushawaha V.:
Observation of intense Stokes and anti-Stokes lines in CH_4 pumped by 355 nm of a Nd:YAG laser.
Appl. Phys. B 55/4, 311-318 (1992) PACS: 78.30 78.32 42.70 42.65
- She C.Y., Alvarez II R.J., Caldwell L.M., Krueger D.A.:
High-spectral-resolution Rayleigh-Mie LIDAR measurement of vertical aerosol and atmospheric profiles.
Appl. Phys. B 55/2, 154-158 (1992) PACS: 42.68A 94.10 92.60 93.30
- Shelby R.M., Rosenbluh M.:
Generation of pulsed squeezed light in a mode-locked optical parametric oscillator.
Appl. Phys. B 55/3, 226-232 (1992) PACS: 42.50D 42.65
- Sibold D., Urbassek H.M.:
Formation of a Knudsen layer in electronically induced desorption.
Appl. Phys. B 55/4, 391-396 (1992) PACS: 68.45D 82.80 79.20
- Sorkina R., Goor F.A. van, Witteman W.J.:
Simulation studies of the prepulse-main-pulse XeCl discharge lasers with magnetic switching.
Appl. Phys. B 55/6, 478-484 (1992) PACS: 42.55G
- Stacewicz T., Kotowski T., Wiewior P.:
Generation of radiation on yellow and infrared lines in sodium vapour excited to the 4P level.
Appl. Phys. B 55/4, 405-407 (1992) PACS: 42.55J
- Stefanutti L., Castagnoli F., Guasta M. Del, Morandi M., Sacco V.M., Zuccagnoli L., Godin S., Megie G., Porteneuve J.:
The Antarctic ozone LIDAR system.
Appl. Phys. B 55/1, 3-12 (1992) PACS: 42.68A 42.68 93.30
- Stefanutti L., Castagnoli F., Guasta M. Del, Morandi M., Sacco V.M., Venturi V., Zuccagnoli L., Kolenda J., Kneipp H., Rairoux P., Weidauer D., Wolf J.P.:
A four-wavelength depolarization backscattering LIDAR for polar stratospheric cloud monitoring.
Appl. Phys. B 55/1, 13-17 (1992) PACS: 42.68A 42.68 93.30
- Tang D.Y., Weiss C.O.:
Phase dynamics of a detuned single-mode laser.
Appl. Phys. B 55/2, 104-108 (1992) PACS: 42.50L 05.45
- Tino G.M., Barsanti M., Angelis M. de, Gianfrani L., Inguscio M.:
Spectroscopy of the 689 nm intercombination line of strontium using an extended-cavity InGaP/InGaAlP diode laser.
Appl. Phys. B 55/4, 397-400 (1992) PACS: 42.55P 32.30
- Tsui K.H.:
High-gain weak-pump free-electron laser-amplifier analysis.
Appl. Phys. B 55/4, 338-340 (1992) PACS: 42.55G 52.75
- Verstuij M., Boogaarts M., Klein-Douwle R., Thus B., Jongh W. de,

Braam A., Meulen J.J. ter, Meerts W.L., Meijer G.:

Laser-induced fluorescence imaging in a 100 kW natural gas flame.
Appl. Phys. B 55/2, 164-170 (1992) PACS: 07.65 82.40 42.80

Weber Th., Lüthy W., Weber H.P.:

Upconversion in $\text{YAlO}_3:\text{Er}$ pumped at 800 nm.
Appl. Phys. B 55/2, 144-148 (1992) PACS: 42.70 78.20

YANG Shao-Chen, GONG Qihuang, XIA Zongju, ZOU Y.H., WU Y.Q.,
QIANG D., SUN Y.L., GU Z.N.:

Large third-order nonlinear optical properties of C_{70} fullerene in the infrared regime.
Appl. Phys. B 55/1, 51-53 (1992) PACS: 42.65H 36.90 42.65

Yu J.R., Huang J.W., Latifi H., She C.Y.:

Initial spring temperature profiles of the mesopause region over Fort Collins, CO, measured by the Colorado State Na temperature LIDAR.
Appl. Phys. B 55/2, 149-153 (1992) PACS: 42.68A 94.10 93.30

Zerza G., Sliwinski G., Schwentner N.:

Threshold and saturation properties of a solid-state XeF (C-A) excimer laser.
Appl. Phys. B 55/4, 331-337 (1992) PACS: 42.50 42.55 42.60

Zhao X.Z., Shen L.J., Lu T.X., Niemax K.:

Spatial distributions of electron density in microplasmas produced by laser ablation of solids.
Appl. Phys. B 55/4, 327-330 (1992) PACS: 52.50J 52.70 52.75 82.80